

REMARKS

The Official Action mailed September 21, 2005, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on October 31, 2005; and June 24, 2005.

Claims 1-41 were pending in the present application prior to the above amendment. Claims 1-10, 26, 27, 34 and 35 have been canceled, claims 28, 30 and 32 have been amended to better recite the features of the present invention. The Applicants note with appreciation the allowance of claims 11-25 and 36-41 (page 3, Paper No. 20050919). Accordingly, claims 11-25, 28-33 and 36-41 are now pending in the present application, of which claims 11, 16, 21, 28, 30, 32, 36, 38 and 40 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

The Official Action rejects claims 1-10 and 26-35 as obvious based on the combination of U.S. Patent Application Publication No. 2000/0000613 to Ohtani et al. and U.S. Patent No. 6,057,227 to Harvey. Claims 1-10, 26, 27, 34 and 35 have been canceled. With respect to remaining claims 28-33, the Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

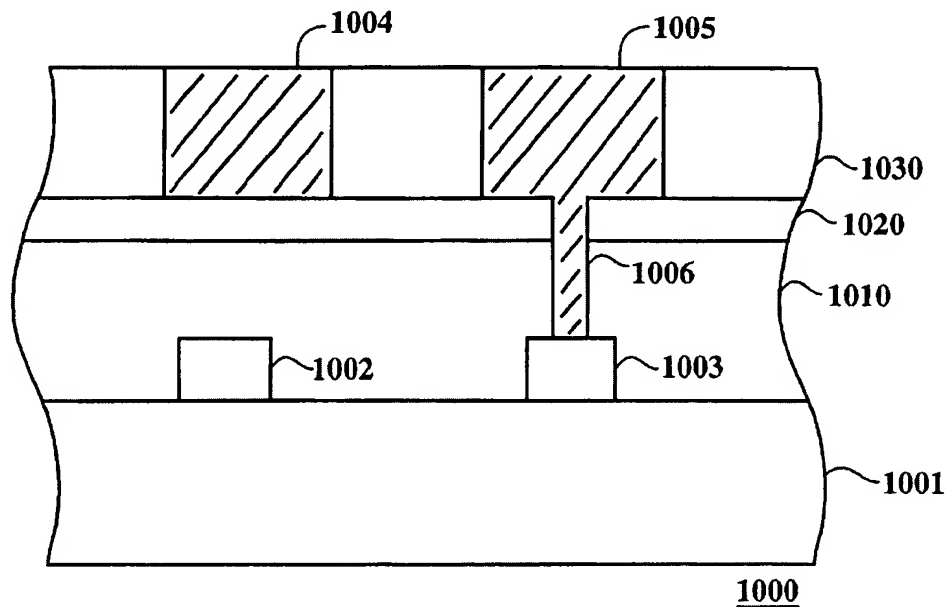
As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 28, 30 and 32 have been amended in order to clarify the order of steps. Specifically, claim 28 has been amended to recite etching the stopper film and the first insulating film and thereby forming a contact hole in the stopper film and the first insulating film located below the concave portion and above the electrode after forming the concave portion; claim 30 has been amended to recite etching the second insulating film with the stopper film as an etching stopper and thereby forming a concave portion connected to the contact hole in the second insulating film after forming the contact hole; and claim 32 has been amended to recite etching the insulating film and thereby forming a contact hole in the insulating film located below the concave portion and above the electrode after forming the concave portion.

Claims 28 and 30 recite a stopper film. The Official Action concedes that Ohtani "does not disclose the specific steps of making contact openings for the pixel electrode" (page 2, Paper No. 20051919). The Official Action relies on Harvey to cure these deficiencies in Ohtani. Specifically, the Official Action asserts that Harvey teaches "various methods for making electrodes including having a contact hole and a 'concave portion' connected to the contact hole and that an etch stop layer may be used" (Id.). As such, it appears that the Official Action may be asserting that etch stop layer 1020 as

shown in Figure 9 of Harvey (reproduced below) corresponds with a stopper film. As such, it may be asserted that the trenches within dielectric layer 1030 and the via opening (column 8, line 33+) in Figure 9 of Harvey corresponds to a concave portion and a contact hole.



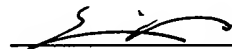
However, the trench and via in Harvey are formed simultaneously (see column 8, lines 37-38). Therefore, Ohtani and Harvey do not teach or suggest etching the stopper film and the first insulating film and thereby forming a contact hole in the stopper film and the first insulating film located below the concave portion and above the electrode after forming the concave portion; or etching the second insulating film with the stopper film as an etching stopper and thereby forming a concave portion connected to the contact hole in the second insulating film after forming the contact hole.

Claim 32 recites that a contact hole is formed after a concave portion, which, for the reasons noted above, is not taught or suggested by Ohtani and Harvey. Therefore, Ohtani and Harvey do not teach or suggest etching the insulating film and thereby forming a contact hole in the insulating film located below the concave portion and above the electrode after forming the concave portion.

Since Ohtani and Harvey do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,


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